UNITED STATES PATENT AND TRADEMARK OFFICE

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HOMAYOUNMEHR, FARID

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2139	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<table>
<tr><td rowspan="3">Office Action Summary</td><td>Application No.
10/675,930</td><td>Applicant(s)
DIETL, JOSEF</td><td></td></tr>
<tr><td>Examiner
Farid Homayounmehr</td><td>Art Unit
2139</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>12 June 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3-8,10,11 and 13-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1, 3-8, 10, 11, 13-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20080911

DETAILED ACTION

1.   This action is responsive to communications: application, filed 9/29/2003;

amendment filed 6/12/2008.

2.   Claims 1-17 have been considered. Claims 2, 9, and 12 cancelled by the

applicant.

Response to Arguments

3.   Applicant's arguments are discussed as follows:

Section 112 Rejections

Applicant argument relative to rejections under section 112 first and second paragraphs

are carefully considered and found non-persuasive. Applicant argues: "Applicant

believes the rejection under § 112, first paragraph, is a result of a misunderstanding of

the claim element. The claim portion reciting "in an unambiguous reading order" defines

the text content. Thus, the text content, which is "in an unambiguous reading order," is

converted into canonical form."

Therefore, Applicant's basis of argument regarding both rejections is that the phrase "the text content in an unambiguous reading order" is both described in the Specification and well-defined because it actually means a text that is in an unambiguous reading order. However, the claim language should clearly define the metes and bounds of the claim language by itself. First, the fact that applicant needed to provide additional explanation shows that the claim language is not clear on its own. Second, while the applicant is allowed to be his/her own lexicographer, the terms must be clearly identified in the reference. The phrase "text content in an unambiguous reading order" is not defined in the Specification to represent a text content that is in an unambiguous reading order. Third, even if the phrase "text content in an unambiguous reading order" is accepted to represent what is argued by the applicant, the phrase "<u>the</u> text content in an unambiguous reading order" would lack antecedent basis in the claim language because the only earlier reference in the claim is to "text content". Accordingly, the mentioned phrase in not clearly defined, and even if considered in view of applicant's arguments, still leaves the claim language undefined. Therefore, appropriate correction is required. A simple correction to include said limitation in a clearly defined manner is to replace the phrase "text content in an unambiguous reading order" with "text content" and add: "wherein the text content is a text which is in an unambiguous reading order".

Based on the above discussion, applicant's arguments relative to rejections under first and second paragraphs of the 112 section is found non-persuasive, and both rejections are maintained until corrections clarifying the claim language are made.

Note further that according to the applicant, the Specification defines an unambiguous

reading order as follows: "Specifically, the originally filed application recites that "the text

[of the electronic document] must have an unambiguous reading order for generating

the control code . . . The unambiguous reading order used for generating and validating

the control code 415 can be any reading order that is used by both the workflow system

100 and the external entity 105." *Present Application, 7:16-22.*". However, If the

unambiguous reading order is <u>any order that is used by the workflow system</u>, it is not

clear how the condition that the text content is a text that is in an unambiguous reading

order further limits the claim language, because the claim readily requires that the

electronic document is to be generated within the workflow system.

<u>Section 103 Rejections</u>

Applicant's argument relative to rejections under section 103 is based on the new

limitation of printing a full-sized version of the document. Applicant's argument is moot

in view of the new ground of rejection under section 103.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1, 10 and 11 rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. Said claims include the limitation: "Converting

the text content in an unambiguous reading order into canonical form". The

Specification does not include converting the text content in an unambiguous reading

order into canonical form. The only section of Specification related to unambiguous

reading order relates to creation of the control codes, and not the text content. In

addition, the Specification does not specify what is meant by unambiguous reading

order.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 1, 10 and 11 rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Said claims include the limitation:

"Converting the text content in an unambiguous reading order into canonical form". The

specification does not specify what is meant by an unambiguous reading order.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 1, 3-8, 10, 11, 13-17 rejected under 35 U.S.C. 103(a) as being

unpatentable over Slater et. al (US Patent Application Publication No. 2002/0069179,

filed June 6, 2001), in view of Shioda (US Patent No. 6,634,559, filed March 29, 2001).

9.1.   As per claim 1, Slater is directed to a method, comprising: in a workflow system

as part of a workflow in the workflow system: generating an electronic document in a

workflow system (parag. 31 shows generation of an electronic document, and parag. 33

indicates that the invention can be used in applications such as business licenses,

which is an example of a workflow system as identified by applicant's specification), for

use with an external entity that does not exchange electronic documents with the

workflow system (Slater does not explicitly teach, but Shioda teaches a data sheet that

can be carried by the user (abstract). The data sheet includes a printout of the encoded

entire electronic document on paper (col. 2 lines 22-63). The data sheet, which includes

the entire document on a printout (not stored electronically), is distributed to other

systems by the user (col. 3 lines 5-35). Note that a decoding unit decodes the encoded

entire document to obtain the entire document back), the electronic document having

text content (documents exampled by Slater include legal documents, which contain

text), the electronic document further having a human-readable document appearance,

representing the text content (Slater parag 31 shows that the document is readable by

both machine and human, therefore it has a content and appearance. Also see Fig. 2B

and associated text); attaching one or more approval codes to the electronic document,

such that when the document is printed, each approval code generates an approval

mark (per Slater parag. 30, the signer of the document examines it (approve) and signs

it (approval code), which is verifiable. As mentioned above, Slater teaches printing the

document. Also per teachings of Shioda, the entire document is printed on the paper in

the encoded form and also the image, therefore the approval codes are also printed);

Converting the text content in an unambiguous reading order into canonical form

(conversion to canonical forms before creating digital signatures were well known in art.

Slater suggests use of XML schema to embed digital signatures. One of the features of

XML is the capability of converting the XML document to its canonical form according to

W3C Canonical XML 1.0 recommendation (as a reference see "Canonical XML Version

1.0" and "Core XML Standards", both of which are attached to this office action). It

would have been obvious to a person skilled in art to convert the document to its

canonical form and encrypt the canonical form to generate a digital signature. The

motivation to do so is faster and more efficient encryption performed on canonical

documents, as described, for example, in section 1.2 of "Canonical XML Version 1.0".

Also conversion as taught by W3C Canonical XML 1.0 is deemed in an unambiguous

reading order, as there is no ambiguity introduced in the method described in the cited

document.)

generating control codes for the electronic document as part of a workflow in the

workflow system (control codes are the signature blocks added to document as

described in parag. 29-32, which contain the signatures. Note that the digital signatures

are encrypted (see Slater parag. 13, indicating that the digital signature is decrypted),

and therefore the encrypted digital signature creates a control code for verification of the

digital signature),

the control codes, including one or more first control codes that each correspond to a

respective approval code (each digital signature is encrypted and saved in the signature

block), and one or more second control codes generated from the canonical form of the

text content (Slater teaches signing the entire document, For example by a notary or

recorder after primary signers sign the document. The signature by notary or recorder

applies to the content of the document, which as described above, includes a

canonically converted text), and creating a print out, the print out including a full-sized

version of the document appearance, the respective approval mark corresponding to

each approval code, the one or more first control codes, and the one or more second

control codes (Slater parag. 64 and also 84. Also note that Shioda teaches printing the

entire document, and therefore Shioda teaches a full-sized version of the document

(see Shioda col. 2 lines 28-63, where it teaches the entire document is printed so the

user can view the entire document), the one or more first control codes being usable to

authenticate the one or more respective approval marks (Slater parag. 31-34 shows verification of each signature, thereby verification of the signature associated with first control codes authenticates the approval marks), and the one or more second control codes being usable to validate the text content of the printout (Slater parag. 31-34 shows verification of each signature, thereby verification of the signature associated with second control codes validates the text, as the signature was associated with the text); and then sending the printout to the external entity (making a printout of a digital signature and distributing them to external entities (Slater teaches distribution of the electronic document. Printing a digital document, and distributing the paper document (such as mailing a document) was inherently known in the art at the time of invention. Slater and Shioda are combined to teach the claim limitation as described above, as it would have been obvious to the one skilled in art to combine the inventions. This is because Slater and Shioda are analogous arts as they are directed to management and distribution of electronic documents. Shioda teaches a data sheet, by which an electronic can be carried and distributed by the user. Therefore, the one skilled in art would be motivated by Shioda to carry and distribute Slater's electronic document.

9.2. Claim 2 cancelled by the applicant

9.3. As per claim 3, Slater is directed to the method of claim 2, wherein generating the approval mark comprises:

generating a digital signature as the approval code (see response to claim 1); and

generating a signature image associated with the approval code (when the signature is

printed, the image of the signature is produced).

9.4.   As per claim 4, Slater is directed to the method of claim 1, wherein generating

one or more second control codes comprises: generating a single second control code

for all of the text content (per paragraph 32, the recorder signature and notary

signature may be omitted. Per parag 44, one or more persons may sign it. Therefore, it

is possible only the notary or only the recorder sign the document, therefore creating a

single signature (control code) for the entire document, which results in a single

signature (control code) is all the text content).

9.5.   As per claim 5, Slater is directed to the method of claim 1, wherein the print out

has two or more physical pages and generating the one or more second control codes

comprises: generating one or more second control codes, each second control code

corresponding to the text content on a page of the one or more physical pages (placing

each digital signature in a separate page is a design choice that is obvious to a person

skilled in art. Also, printing documents amounting to two or more pages was widely

practiced and well-known in the art at the time of invention).

9.6.   As per claim 6, Slater is directed to the method of claim 1, wherein generating

the one or more second control codes comprises: encrypting the canonical form with a

private key, the private key having an associated public key certificate for retrieving a

public key associated with the private key (conversion to canonical forms before

creating digital signatures were well known in art. Slater suggests use of XML schema

to embed digital signatures. One of the features of XML is the capability of converting

the XML document to its canonical form according to W3C Canonical XML 1.0

recommendation (as a reference see "Canonical XML Version 1.0" and "Core XML

Standards", both of which are attached to this office action). It would have been

obvious to a person skilled in art to convert the document to its canonical form and

encrypt the canonical form to generate a digital signature. The motivation to do so is

faster and more efficient encryption performed on canonical documents, as described,

for example, in section 1.2 of "Canonical XML Version 1.0". Use of private and public

keys to create and verify digital signatures was well known and widely practiced at the

time of invention).

9.7.   As per claim 7, Slater is directed to the method of claim 1, further comprising:

receiving the print out at the workflow system from an external entity, the print out

having a subsequently added human signature; validating the received print out within

the workflow system (validation of signatures on a paper is known in the prior art as

suggested in parag. 6), and then continuing in the workflow system. Examiner takes

the Official Notice that receiving documents in the printed form, scanning documents to

create an electronic form, and processing the electronic document in a workflow

system, such as the one taught by the combination of Slater and Shioda, was widely

practiced, and well-known at the time of invention. Therefore, it would have been obvious to the one skilled in art to receive a document in printed form from an external entity, and using the workflow system to validate the document. Note that as described in rejection of claim 1, the combination of Slater and Shioda teaches creating a printout of digital document with embedded digital signatures. The printed form is human readable. Therefore, the reverse process, that is converting the printout to electronic form, and performing the verification, would have been obvious to the one skilled in art.

9.8.   Limitations of claim 8 are directed to receiving and verifying the documents generated in claims 1-7 above. Figs. 4-6 and associated text describe receiving and validating the digital documents. Note also that as described in rejection of claim 7, Examiner takes the Official Notice that receiving documents in the printed form, scanning documents to create an electronic form, and processing the electronic document in a workflow system, such as the one taught by the combination of Slater and Shioda, was widely practiced, and well-known at the time of invention. Therefore, it would have been obvious to the one skilled in art to receive a document in printed form from an external entity, and using the workflow system to validate the document. Note that as described in rejection of claim 1, the combination of Slater and Shioda teaches creating a printout of digital document with embedded digital signatures. The printed form is human readable. Therefore, the reverse process, that is converting the printout to electronic form, and performing the verification, would have been obvious to the one skilled in art.

9.9.   Limitations of claims 10, 11, 13-17 are substantially the same as limitations of

claims 1, 3-7 above.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Farid Homayounmehr whose telephone number is (571)

272-3739. The examiner can be normally reached on 9 hrs Mon-Fri, off Monday
biweekly.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.
Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published
applications may be obtained from either Private PAIR or Public PAIR. Status
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have questions on access to the Private PAIR system, contact the Electronic Business
Center (EBC) at 866-217-9197 (toll-free).

Farid Homayounmehr

8/11/2008

/Kristine Kincaid/

Supervisory Patent Examiner, Art Unit 2139